CLAIMS

We claim:

1. A method of treating a patient, said method comprising implanting into said patient a porcine heart valve xenograft; wherein cells of said xenograft contain a disruption of the α1-3 galactosyl transferase nucleic acid sequence.

2. The method of claim 1, wherein said heart valve xenograft is a tricuspid valve or a portion thereof.

3. The method of claim 1, wherein said heart valve xenograft is a mitral valve or a portion thereof.

4. The method of claim 1, wherein said heart valve xenograft is an aortic valve or a portion thereof.

5. The method of claim 1, wherein said heart valve xenograft is a pulmonary valve or a portion thereof.

6. The method of claim 1, wherein said heart valve xenograft is pericardial tissue.

7. An article of manufacture comprising a porcine heart valve xenograft and a storage solution, wherein cells of said xenograft contain a disruption of the α1-3 galactosyl transferase nucleic acid sequence.

8. The article of manufacture of claim 7, wherein said storage solution is saline, a tissue preservative, or a cryoprotectant.

9. The article of manufacture of claim 8, wherein said cryoprotectant is dimethylsulfoxide, glycerol, albumin, monosaccharides, disaccharides, or serum.

10. A method of preparing a xenograft heart valve for implantation in a human, said method comprising providing a xenograft from a pig, wherein said xenograft comprises a portion of a heart valve, wherein said pig's genome comprises a disruption of an α1-3 galactosyl transferase nucleic acid sequence, said disruption resulting in endothelial cells of said pig having reduced or no detectable expression of Gal α1-3Galβ1-4GlcNac on their surface relative to cells of a control pig; and contacting said xenograft with a fixative.

11. The method of claim 10, wherein said fixative is selected from the group consisting of gluteraldehyde, formaldehyde, adipic dialdehyde, an aliphatic diamine, an aromatic diamine, a carbodiimide, and a diisocyanate.

12. The method of claim 10, wherein said fixative is gluteraldehyde.

13. The method of claim 10, wherein said method further comprises subjecting said xenograft to a freeze/thaw cycle.

14. The method of claim 10, wherein said method further comprises contacting said xenograft with an agent selected from the group consisting of an anti-calcification agent, an anti-thrombotic agent, an antibiotic, and a growth factor.

15. The method of claim 10, wherein said method further comprises sterilizing said xenograft.

16. An article of manufacture comprising a heart valve xenograft from a pig, wherein said pig's genome comprises a disruption of an α1-3 galactosyl transferase nucleic acid sequence, said disruption resulting in endothelial cells of said pig having reduced or no detectable expression of Gal α1-3Galβ1-4GlcNac on their surface relative to cells of a control pig.

17. The article of manufacture of claim 16, wherein said xenograft is attached to a stent.